



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/809,492

03/26/2004

Ted Guidotti

018798-222

7892

21839

7590

05/25/2006

BUCHANAN INGERSOLL PC  
(INCLUDING BURNS, DOANE, SWECKER & MATHIS)  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER

HAND, MELANIE JO

ART UNIT

PAPER NUMBER

3761

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/809,492	<b>Applicant(s)</b> GUIDOTTI ET AL.	
	<b>Examiner</b> Melanie J. Hand	<b>Art Unit</b> 3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments, see Remarks, filed March 3, 2006, with respect to the rejection(s) of claim(s) 1 and 16 under 35 U.S.C. 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references.

### *Claim Rejections - 35 USC § 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-5, 7-9, 13-17 and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al (U.S. Patent Application Publication No. 2003/0208175) in view of Bernardin (U.S. Patent No. 5,009,650).

With respect to **Claims 1, 3-5, 14-17, 19, 22 and 23**: Gross teaches an absorbent article having a crotch portion and two end portions and comprising liquid pervious topsheet 10 (upper surface) and absorbent core 15 comprised of acquisition layer 11, storage layer 12 and wicking layer 13. (Fig. 1) (¶ 0080) Gross teaches that the wicking layer 13 is a "lower storage layer" (at least one first storage layer) (¶ 0005). Gross teaches that the same material can be used in the wicking layer as in a second, lower density storage layer 12, and since the storage layer has a thickness less than that of said wicking layer (¶ 0005), the amount of superabsorbent material by weight is thus equal to or less than the amount present in the wicking layer. Gross teaches

Art Unit: 3761

that the density of a channeled wicking layer 13 is between 0.1-0.5 g/cc (¶¶ 0073,0078) and therefore Gross teaches that the density of the storage layer 13 exceeds 0.4 g/cc. Channels 22 (recesses) (Figs. 2,9) are created by compacting the web and therefore said channels extend through the entire thickness of said article.

Gross does not teach that the wicking/storage layer 13 contains superabsorbent material. Bernardin teaches an absorbent article having a wicking/storage layer comprised of a portion of superabsorbent material placed below a high-density absorbent layer. Bernardin teaches that this superabsorbent storage layer acts as an additional fluid reservoir, therefore it would be obvious to one of ordinary skill in the art to modify the wicking/storage layer 13 taught by Gross so as to be comprised of superabsorbent as taught by Bernardin so as to provide an additional reservoir for fluid storage in order to prevent leakage.

Bernardin teaches that the superabsorbent is present in an amount of 40 wt%, which does not fall in the range set forth by applicant, however it would be obvious to one of ordinary skill in the art to increase the weight percentage taught by Bernardin to be at least 50% by weight of the layer as additional superabsorbent would be beneficial for the function of a wicking/storage layer by providing additional absorption capacity without interfering with the function of the wicking/storage layer of the combined teaching of Gross and Bernardin.

With respect to **Claims 2 and 18**: Examiner is concluding that additional channels 22 are capable of being formed though Gross does not specifically teach an upper limit to the number of channels 22, only that there is a plurality of such channels. Therefore the density of the first storage layer 12 along with any other layer in the web is capable of being increased via the addition of more channels 22 and thus obviously exceeding 0.5 g/cc. These channels guide fluid

Art Unit: 3761

away from the skin surface of the user, therefore it would be obvious to one of ordinary skill in the art to form at least one additional channel, thus increasing the density to at least 0.5 g/cc.

With respect to **Claims 7, 8, 20 and 21**: Gross teaches that acquisition layer 11 is disposed between topsheet 10 and storage layer 13, therefore the acquisition layer is adjacent a first surface of storage layer 13 that faces topsheet 10 (claim 7). (¶ 0084) Since first storage layer 13 is a film or sheet of minimal thickness, acquisition layer 11 is concluded herein to lie close to the second surface of storage layer 12 that faces away from topsheet 10. (claims 8,20,21)

With respect to **Claim 9**: Gross teaches that the web is densified via embossing, which also entangles fibers via heat and pressure. The acquisition layer 11 and topsheet 10 are thus thermally joined in the embossing areas of storage layer 13, i.e. channels 22.

With respect to **Claim 13**: Gross teaches treating the wicking layer 13 with a surfactant to improve wettability (¶ 0071). The applicant states in the specification that

In order to further improve such an acquisition layer, it has been shown to be an advantage to corona-treat the acquisition layer. In corona treating, the layer is treated with plasma, which is a gas being subjected to enough energy to entirely or partly ionize the gas. The contact with the energy-rich gas with the surface of the material, results in that radicals are formed on the surface of the material. Thereafter, different types of functional groups are introduced, such as for example, oxygen-containing functional groups. The advantage using such a corona-treated material is that it exhibits an improved liquid distributing ability compared to a non-corona-treated material. (Specification, ¶ 0021)

In light of this, it would be obvious to one of ordinary skill in the art to corona treat the surface of the article of Gross, as the gas plasma used in the corona treatment process is considered

herein to be a surfactant that also achieves the result of increased wettability, which Gross teaches is a feature of the instant invention.

With respect to **Claims 24,25**: Gross does not teach that wicking/storage layer 13 is located between the liquid permeable topsheet and the acquisition layer. However, since Gross teaches two storage layers 12 and 13, and storage layer 12 is located between said topsheet and said acquisition layer, and applicant state sthat the reason for placing a storage layer in this position is to prevent rewet, the wicking/storage layer 13 is also capable of preventing this. Since both layers 12,13 are storage layers and provide a substantially identical function, it would be obvious to one of ordinary skill in the art to either switch or replace the layer 12 with a layer 13. Therer would be no loss or destruction of function and this modification could be made with a reasonable expectation of success.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al ('175) in view of Bernardin ('650) as applied to claims 1-5, 7-9, 13-17 and 19-23 above, and further in view of Lassen et al (U.S. Patent Application Publication No. 2002/0013563).

With respect to **Claim 6**: The combined teaching of Gross and Bernardin does not teach a particular width for channels 22 and thus also does not teach a maximum width for the material contained between adjacent said channels. Lassen teaches article 10 has a width in the range of 2-10 cm, or 20-100 mm (¶ 0057), therefore the transverse width of members 26 and 28 will be less than about 20 mm. Lassen teaches that article 10 has a segmented core with segments of this width so as to accommodate flexure axes to allow it to bend preferentially convexly toward the user's body to put said article in a more advantageous position to perform its

function, therefore it would be obvious to one of ordinary skill in the art to modify the channels 22 taught by the combined teaching of Gross and Bernardin to have a width of no greater than 20 mm as this allows the crotch portion of the article to conform to fit the crotch area of the user as taught by Lassen.

Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al ('175) in view of Bernardin ('650) as applied to claims 1-5, 7-9, 13-17 and 19-23 above, and further in view of Berg et al (U.S. Patent No. 5,180,622).

With respect to **Claims 10 and 12**: Gross does not teach that acquisition layer 11 is comprised of polyacrylate foam material. Berg teaches a polyacrylate foam material used in an absorbent core 41 of a diaper 20. (Fig. 1) (Col. 22, lines 61-65). Said absorbent core is comprised of an acquisition zone 56 (Col. 32, lines 35-44) and since the core material is uniform throughout, said acquisition zone 56 is also comprised of polyacrylate foam material. (claim 10) Berg teaches that said foam material is formed by an acrylic acid monomer allowed to polymerize with the aid of an interparticle crosslinking agent sprayed on the acrylic acid monomers. (Col. 7, lines 40-46, Co. 14, lines 28-39) (claim 12) Berg teaches that such a material especially in film form integrated in an absorbent article enhances fluid uptake rate and minimizes gel blocking (Abstract), therefore it would be obvious to one of ordinary skill in the art to modify the acquisition layer taught by Gross to be comprised of a polyacrylate foam sheet material as taught by Berg.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al ('175) in view of Bernardin ('650) and further in view of Berg et al (U.S. Patent No. 5,180,622) as applied to claim 10 above, and further in view of Shepard et al (U.S. Patent No. 6,869,659).

With respect to **Claim 11**: The combined teaching of Gross and Bernardin and Berg does not teach an absorbent article comprising a polyacrylate foam acquisition layer having a Gurley stiffness of less than 1,000 mgf.

Shepard teaches a foam coating applied to a nonwoven web as a backing that is an acrylic foam. Shepard teaches that the web having the foam coating is the backing for a loop fastener fabric, wherein the loop fabric has a Gurley stiffness of less than 300 mg. The loop fabric has a slight stiffness that Shepard teaches can be reduced, therefore the stiffness of the foam itself cannot be greater than 1,000 mgf if the stiffness of the entire fabric, comprised of thin flexible nonwoven materials, has a stiffness of less than about 300 mgf. Shepard teaches that such a foam coating results in a thin, flexible loop fastener fabric, therefore it would be obvious to one of ordinary skill in the art to employ a foam layer or coating in the article taught by the combined teaching of Gross and Bernardin and Berg so as to have a Gurley stiffness for the acquisition layer of less than 300 mgf as taught by Shepard.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie J. Hand whose telephone number is 571-272-6464. The examiner can normally be reached on Mon-Thurs 8:00-5:30, alternate Fridays 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3761

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melanie J Hand  
Examiner  
Art Unit 3761

MJH

**TATYANA ZALUKAEVA**  
**SUPERVISORY PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read 'Tatyana', with a long, sweeping horizontal stroke extending to the right.